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Preferences of Patients, Their Family Caregivers and Vascular Surgeons in the Choice of Abdominal Aortic Aneurysms Treatment Options: The PREFER Study

Faggioli G., Scalone L., Mantovani L.G., Borghetti F., Stella A. on behalf of the PREFER study group. Eur J Vasc Endovasc Surg 2011;42:26-34.

Objective: Factors influencing the choice between endovascular (endovascular aneurysm repair, EVAR) and open repair (OPEN) of abdominal aortic aneurysm (AAA) are of increasing interest. We quantified their importance among the different subjects involved in the treatment.

Methods: Pre- and postoperative patients (pts), their relatives and vascular surgeons completed questionnaires evaluating six treatment characteristics: anaesthesia; recovery time to basic everyday activities; risk of re-intervention at 5 years (RR); complexity of follow-up; risk of major complications; and additional cost of intervention (AC). Through a discrete choice experiment, hypothetical scenarios of treatment were obtained and the relative importance (RI) of each characteristic was determined through a conditional logistic regression model.

Results: A total of 160 pts, 102 relatives and 30 surgeons from nine centres completed the questionnaires. Major complications and re-intervention risk were the most important characteristics (RI = 56.0% and 27.2%, respectively) for all the respondent categories. Pts and their relatives considered very important also a possible out-of-pocket AC. Recovery time and type of anaesthesia were among the least important characteristics, including hospital additional cost for surgeons. The different categories of respondents showed different opinions towards different treatment characteristics depending also on possible previous treatment.

Conclusion: Preferences for AAA treatment characteristics differ between groups of involved subjects. Understanding individuals' preferences could help in optimising treatment benefits.

EVAR Using the Nellix Sac-anchoring Endoprosthesis: Treatment of Favourable and Adverse Anatomy

Krievins D.K., Holden A., Savlovskis J., Calderas C., Donayre C.E., Moll F.L., Katzen B., Zarins C.K. Eur J Vasc Endovasc Surg 2011;42:38-46.

Objective: The study aimed to review the results of endovascular aneurysm repair (EVAR) using a novel sac-anchoring endoprosthesis in patients with favourable and adverse anatomy.

Design: This is a prospective, multicentre, clinical trial.

Materials: The Nellix endoprosthesis consists of dual, balloon-expandable endoframes, surrounded by polymer-filled endobags, which obliterate the aneurysm sac and maintain endograft position.

Methods: The study reviewed worldwide clinical experience and Core Lab evaluation of computed tomography (CT) scans.

Results: From 2008 to 2010, 34 patients (age 71 ± 8 years, abdominal aortic aneurysm (AAA) diameter 5.8 ± 0.8 cm) were treated at four clinical sites. Seventeen patients (50%) met the inclusion criteria for Food and Drug Administration (FDA)-approved endografts (favourable anatomy); 17 (50%) had one or more adverse anatomic feature: neck length <10 mm (24%), neck angle >60° (9%) and iliac diameter >23 mm (38%). Device deployment was successful in all patients; iliac aneurysm treatment preserved hypogastric patency. Perioperative mortality was 1/34 (2.9%); one patient died at 10 months of congestive heart failure (CHF); one patient had a secondary procedure at 15 months. During 15 ± 6 months follow-up, there were no differences in outcome between favourable and adverse anatomy patients. Follow-up CT extending up to 2 years revealed no change in aneurysm size or endograft position and no new endoleaks.

Conclusions: Favourable and adverse anatomy patients can be successfully treated using the Nellix sac-anchoring endoprosthesis. Early results are promising but longer-term studies are needed.

Fenestrated Aortic Endografts for Juxtarenal Aortic Aneurysm: Medium Term Outcomes

Tambyraja A.L., Fishwick N.G., Bown M.J., Nasim A., McCarthy M.J., Sayers R.D. Eur J Vasc Endovasc Surg 2011;42:54-8.

Aims: The utility of fenestrated-endovascular aneurysm repair (FEVAR) remains uncertain. This study examines the medium term outcomes of patients undergoing FEVAR for asymptomatic juxtarenal abdominal aortic aneurysm (AAA).

Methods: Consecutive patients undergoing elective FEVAR for juxtarenal AAA at a single tertiary centre were studied between October 2005 and March 2010. Patients were followed up for at least six-months within a protocol including clinical examination, laboratory studies, CT and duplex imaging, and abdominal radiographs. Outcomes were assessed in terms of survival, target vessel patency and graft related complications.

Results: Twenty-nine patients were analysed on an intention to treat basis. There were 27 men and two women of median (range) age 74 (54–86) years. Mean (SD) aneurysm diameter was 68 (7) mm. Median (range) ASA score was 3 (2–4). No procedures required conversion to an open procedure, but one procedure was abandoned. Seventy-nine visceral vessels were perfused through a fabric fenestration or scallop. All vessels remained patent at completion angiography. No patients died within 30-days of surgery. During follow up there were four (14%) deaths at a median (range) of 17 (8–21) months after aneurysm repair. None of these deaths were aneurysm related. Eighteen (62%) patients suffered one or more graft related complications, of whom 11 (38%) required one or more early or late reintervention.

Conclusions: Fenestrated aortic endografts can be utilized safely in the management of juxtarenal AAA in patients at high-risk for open surgery. However, the rate of graft related complication and reintervention is high at medium term follow up.

Post-operative Surveillance after Open Peripheral Arterial Surgery

Lane T.R.A., Metcalfe M.J., Narayanan S., Davies A.H. Eur J Vasc Endovasc Surg 2011;42:59-77.

Background: Guidelines and protocols assist in the clinical management of patients, helping to utilise available resources efficiently, however, there is limited documented guidance on surveillance of patients following open arterial surgery. The frequency of clinical follow up, Doppler ultrasound measurements and radiological imaging should all be justified. Here we review the available literature to offer an evidenced based approach to postoperative care.

Method: An electronic search was made of Medline and Embase databases through September 2009 revealing over 2300 studies in the initial searches. Following title and abstract screening, the relevant medical literature concerning post-operative surveillance of open vascular procedures was reviewed (300 papers). 42 papers were included in this review. Surveillance recommendations were constructed from the evidence presented.

Results and conclusion: Detailed anatomical imaging is available for the technical assessment in the majority of patients' postoperative management; however there is little Level 1 evidence to guide modality or timing. Grades B and C recommendations form the majority of surveillance recommendations. Clinical review remains the mainstay of surveillance following open peripheral arterial surgery. Duplex scanning is the imaging modality of choice when indicated in most instances. Minimal data exists to quantify quality of life or intervention efficacy.

Duplex Ultrasound Investigation of the Veins of the Lower Limbs after Treatment for Varicose Veins – UIP Consensus Document

De Maeseneer M., Pichot O., Cavezzi A., Earnshaw J., van Rij A., Lurie F., Smith P.C. Eur J Vasc Endovasc Surg 2011;42:89-102.

Objectives: Duplex ultrasound has become the reference standard in assessing the morphology and haemodynamics of the lower limb veins. The project described in this article was an initiative of the Union Internationale de Phlébologie (UIP). The aim was to obtain a consensus of international experts on the methodology and terminology to be used for assessment after treatment of incompetent superficial and perforating veins in the lower limb by ultrasound imaging.

Design: The study design was consensus meetings leading to a consensus document.

Methods: The UIP invited group submitted relevant literature references and written contributions concerning the methodology, terminology and value of duplex imaging after treatment. The authors prepared a draft document that was circulated to a larger group of experts and revised according to the comments received. Eventually, all participants agreed upon the final version of the article.

Results: Formal analysis of the results of interventions for varicose veins relies on adequate preoperative assessment and a careful description of

the procedure employed. The timing of investigations of outcome should be classified as immediate (1–4 weeks), short-term (1 year), midterm (2–3 years) and long-term (5 years or more). The examination should employ standard methodology and formally described variables, which can be tailored to the intervention that was undertaken. The experts have made detailed recommendations concerning the methods to be used for duplex ultrasound examination and reporting after various treatments for varicose veins, including novel treatments under scientific study.

Conclusions: Duplex ultrasonography is a fundamental component of the investigation of the lower limb venous system after treatment for varicose veins.